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The effect of federal supporting grants on the incentives of regional authorities

Влияние межбюджетных отношений на экономические стимулы регионов

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Contents

1. Introduction

The economy of the Russian Federation is heavily imbalanced across regions varying by climatic conditions, natural resources, development level, living standards and unemployment rates, industrial structure, etc. Leveling off socio-economic disparities between subject entities of the Russian Federation is high on the central government's economic agenda.

Tools to pursue the above policy are diverse ranging from direct budget investments into the regional economies to introduction of special regulatory mechanisms ensuring beneficial terms of doing business. These may be drawn upon to directly leverage socio-economic situation or encourage economic agents to take efforts to develop the regional economy.

One of these tools is the mechanism and criteria of estimating the size of grants allocated from the federal budget to the budgets of the RF subject entities. The level of businesses' economic activity in the region is to a large extent dependent on regional authorities in that the latter may either create conditions conducive to the inflow of investments, creation of new jobs, etc. or on the contrary, obstruct the process by putting administrative barriers on the way of business and, consequently, the economic development of the region. As such allocation of grants from the federal budget may or may not encourage regional authorities to seek ways of creating business-friendly environment in their territories.

This paper analyses the impact of the system of grants existing in the Russian Federation as a tool of encouraging regional economic development. Firstly, we focused on the mechanism of *supporting grants* allocation. The statistical econometric analysis showed a *negative destimulating effect* on fiscal incentives of regional authorities as the deferred fiscal revenues tend to decrease. The above effect is accountable for the lack of mechanism in the grants allocation from the Federal Fund of Regional Support ("FFRS") that would encourage the regional authorities to redouble fiscal efforts and expand the taxable base. The existing methodology proceeds from the need to absorb the deficit of the regional budget and is actually based on the size of grants allocated in the previous years.

Besides, the analysis showed that the regional authorities are guided in their spending and fiscal policies by the *specific performance* indicators, i.e. amount of collectable taxes, level of collectability, tax income per capita (including CPI-adjusted data), tax income per unit of taxable base. Consequently, efforts of the regional authorities are directed not at the development of the taxable base but at meeting another objective i.e. to ensure collectability of taxes *at least at the designated level*.

Inefficiency of the regional budget expenditures allocated for the administrative functions or industry development leads to *statistically insignificant correlation* between the improvement of economic situation in the region and the size of the federal grant.

Based on this analysis we present our *recommendations* as to what should be the mechanism (i.e. grants calculation and distribution methodology) in place so that:

- Regional authorities would not have opportunities or wish to depart from it;
- Negative destimulating effects would be minimized; and
- Such methodology should not only make up for the income gaps but give an impetus to further expansion of the taxable base.

In other words, to make the effect of grants really stimulating with recipient regions shifting from the reactive to the proactive tax base expansion strategy it is necessary to put in place a mechanism of grants distribution which may include *inter alia benefits* for the increased fiscal revenues or economic growth. Such a mechanism should tie the size of the grant not only to the regional budget deficit but to an increase in the fiscal income as well.

Structurally, our analysis is arranged as follows:

Section I is introductory.

Section II presents the problem and introduces the key definitions. It describes the types of supporting grants, how and in what way they impact the regional economy, and presents various methodologies of assessing their possible destimulating effects. The drawbacks of the previous dedicated papers are highlighted, new areas of research are presented and a number of key definitions and concepts are specified. The applied methodology is provided with the substantiating background.

Section III deals with the empirical testing of various hypotheses about the distorting effect of the supporting grants and evaluates the performance of regional budget expenses. This section provides general assessment of the recipient regions and sets out criteria for grants allocation. It ties the grant provision not only to the region's qualification under the formally established criteria but to its political orientation, social situation and corruption of administration.

The *final section* - Conclusions – presents our findings and recommendations.

Appendix includes a description of the used database and graphs.

2. Problem statement

The macroeconomic analysis of large countries with a federative structure is normally based on the assumption that these are viewed as an array of heterogeneous objects – regions, lands, republics, territories, states, etc. The regions differ by both objective factors: i.e. geographically, climatically, historically, demographically, etc. and also by the factors in the realm of politics: effectiveness of their administrations or whether or not the latter enjoy the support of the federal center.

Russia's integration into Europe along with the raising of the average living standards to those acceptable in Europe also requires elimination of the internal disparity among regions not typical of the jurisdictions with reasonable intergovernmental redistribution. One of the most viable mechanisms to do away with such disparity is financial aid that might be allocated to the budgets of other levels.

Publications dedicated to intergovernmental relationships are numerous. Without setting an objective to highlight all the aspects of the above problem we will only touch upon the most critical ones, in our opinion.

Firstly, this is the problem of ensuring the balance of the budgeting system vertically as well as horizontally which means an effective segregation of fiscal and spending authorities between the center and regions and realignment of access to budget resources.

Secondly, this is a review of intergovernmental grants for their impact on both economic and social situation in the region.

Thirdly, this is the problem of creating such a system of aid distribution across regional budgets that will encourage regional authorities to translate it into the real economic growth. The formula "fiscal revenues – spending – economic growth" is also related to evaluation of the regional budget revenues and expenditures performance.

The most comprehensive publications in the area of budget federalism are the publications by R.Musgrave and W. Oates. The fiscal federalism theory is based on the assumption that macroeconomic regulation and horizontal redistribution of revenues need to be concentrated at the highest levels of the budgeting hierarchy while provision of some of the public goods should be assigned to the lower level budgets.

At the same time some other studies (R. Boadway) show that decentralization of spending authorities is not always associated with the advantages as it is accompanied by external fiscal effects. Intergovernmental grants play a role of the mechanism to dampen the arising external effects and ensure the budgeting system balance both vertically and horizontally.

Intergovernmental relationships in the Russian Federation are unique in that the grants from other budgets often represent the only source of cash flows for some of the regions. These are the Republic of Dagestan, Republic of Ingushetia, Komi-Perm Autonomous Region, Ust-Orda Autonomous Region, and the Republic of Tyva where the grants account for over 80% of the regional consolidated budget expenditures (these intergovernmental grants do not include

federal taxes allocations distributable on a shared basis[1]). The revenues/spending ratio across the regions in 2002 did not exceed 50% on average (see Fig. 1).

The uneven distribution of the climatic and natural resources and industrial potential, on the one hand, and the budget service users, on the other hand, calls for *horizontal* along with *vertical* leveling so that the ability of regional authorities to collect fiscal revenues be in line with their spending needs. Such direct regulation — leveling off the regional budgets support — is the primary goal of the Federal Fund for Regional Support (FFRS) (Fig. 2, 3).

Federal Fund for Regional (Subject Entities) Support

FFRS funds are distributed based on the analysis of the region's gross fiscal resources, fiscal potential, budget spending indices, etc. so as to bring per capita fiscal resources of the poorest (by the average level criterion) regions in line with the average level.

Determination of the region's fiscal potential index should be based, among other things, on the added value generated by the regional industries (regional GDP) and the industrial structure of the regional economy.

The underlying methodology of the FFRS funds allocation, with all its strengths and weaknesses, has more than once aroused discussions among academics (see the publications of the Fiscal Policy Center and ITPE think tank); one can read about it on the Ministry of Finance website ("Methodology and Results of the Estimate of the Grants Allocated by the Federal Fund for the Subject Entities Support (FFRS) for 2004"). The supporting grants formula was for the first time applied in the preparation of the 1994 budget and was changed in 2001.

Under the Concept of Intergovernmental Relationships Restructuring and the Budget Code, financial aid is to be estimated on the basis of a unified system of federal and regional fiscal potential criteria. However, while at the federal level fiscal potential is derived by types of revenues, at the regional level the Ministry of Finance uses the regional GDP, a measure that does not provide for a reliable approximation of the above estimate. It should also be noted that the government used the 2001 regional GDP as the basis for determination of the 2004 grants, utterly disregarding the structural changes that have taken place over the last 3 years. Hence, the lack of reliable negative statistical relationship between the size of the federal subsidies and such measures of living standards and economic development as the unemployment rate, average per capita income, Gini coefficient, social strain indicators (number of strikes) etc.

To assess the vertical balance of the budget system we used the indicators tied to the share of intergovernmental grants in the total spending of sub-federal budgets or the portion of spending that can be absorbed through the use of the sub-federal budgets' own revenues. Both indicators do not project an objective picture: the size of spending depends on the size of revenues, i.e. the greater the grants received by sub-federal budgets, the more funds should be allocated for spending needs.

[1] Allocations from federal taxes are accounted for only as revenues of lower budgets without being recorded as incomes or expenses of the higher (federal or regional) budget which artificially diminishes the intergovernmental flows in the Russian Federations and the actual level of income centralization.

FFRS grants accounting for **up to 40% of the regional budget expenditures,** like any other grants, are exerting apart from their supporting role a significant destimulating effect on the intent of regional authorities to expand fiscal base (i.e. potential abilities of the region to generate fiscal revenues) and raise the tax collectability. As the liquidation of budget support disparity is the main criterion for the allocation of the required financial aid and given the lumpsum rather than the target character of supporting grants it is no wonder that regions may not be very much encouraged to pursue the policy in the interests of the federal center.

Other funds

The lack of significant stimulating or destimulating effect of the FFRS grants on the regional economic performance may be accountable for the fact that these are directed primarily to cover regional budget deficits[2], i.e. to ensure fulfillment of the assumed social commitments. Besides, the FFRS grants are allocated exclusively to poor regions (71 regions out of 89 in 2004) to help them level up the spending part of their budgets.

At the same time over **50% of the entire financial aid** is granted through other funds: Compensation Fund (also designated for tied financing of federal laws enforcement); Fund of Co-Financing of Social Spending (to encourage priority expenditures and support the social sphere restructuring); Regional Development Fund (support of regional infrastructure development); Fund for Regional Finances Reforming (support and stimulation of budget reforms). All the above funds are in fact targeted allocations i.e. either subsidies or grants.

Fiscal potential of the region: how to determine it properly

In order to define the key drivers of the financial aid it is necessary to properly evaluate fiscal potentials and spending needs across regions.

There are various indicators to measure fiscal potential and fiscal efforts, etc. (see the article "Evaluation of Fiscal Potential of the Regions and Distribution of Federal Grants" (Batkibekov, Kadochnikov, Lugovoi, Sinelnikov, Trunin) and the official publication of the Ministry of Finance "Methodology and Results of the Estimate of the Grants Allocated by the Federal Fund for the Subject Entities Support (FFRS) for 2004").

Fiscal potential of the regions may be benchmarked against:

- The amount of actually collected taxes (or fiscal revenues for the prior years);
- Sufficiency of taxable resources (regional wage bill, personal income - average per capita income, gross added value, regional GDP, the total amount of taxable income, aggregate taxable resources, "representative tax system").

Fiscal efforts (i.e. fiscal performance) of regional authorities may be measured as:

- The relationship of collectable taxes to sufficiency of taxable resources, regional GDP or industrial output;
- Per capita fiscal revenues vs. consumer goods basket or living minimum wage.

[2] Officially this policy had been in place until 1998.

2.1 Distorting impact of intergovernmental relations in Russia: empirical analysis

Leveling off disparity in the people's access to budget services (and, consequently, budget spending) may proceed by virtue of various mechanisms and "formulas". One of the chief problems in such realignment is that financing of these services from the federal center may have a destimulating effect, i.e. *weaken incentives* of the regional authorities to expand the tax base of their regions. And, indeed, why should they do it if the needs of the people living in this region are met through the budget redistribution, i.e. actually through the efforts of *other* regions. Any activities to develop the economic potential of the region would then seem superfluous to regional leadership. In other words, horizontal leveling may potentially exert a *distorting effect* on the authorities' incentives when it comes to development of the regional economy.

At the same time even with all the problems specific of the Russia of today it is still possible to develop a mechanism of grants distribution that will minimize their destimilating effect or even help to transform it into an incentive factor.

Accordingly, a review of the grants distribution system involves the following stages:

- Determine the key factors driving the size of the government grants;
- Define channels to manage economic growth;
- Evaluate the extent of incentives distortion and the nature thereof;
- Determine parameters of an optimum distribution system;
- Prepare recommendations.

There are quite a few theoretical models and methodologies to measure the destimulating effect of the supporting grants[3].

However, as far as the destimulating effect of intergovernmental grants on the Russian regions is concerned the performed studies did not prove the above speculation.

Publications of G. Kurlyandskaya and M. Alexeev[4] presenting the findings of their analysis into correlation between the size of the local budget spending and transfers from the budgets of other levels showed that the regional center subsidies *recompense for a decrease in* municipal revenues without giving rise to negative or positive incentives alike.

In one of the earliest publications on the destimulating effect of intergovernmental grants on the local budgets (E. Zhuravskaya[5]) the assumption about the distortion of incentives had not been supported as well. This was accountable for the high dependence of local administration on their regional superiors specifically in what concerns budget spending. As is seen from the budget statistics across municipalities the sharing of fiscal revenues between the regional and the local budgets does not encourage the local administration to expand the taxable base. Any

[3] Detailed analysis – see Kadochnikov et al. (2002).
[4] Alexeev M., Kurlyandskaya G. "Fiscal federalism and incentives in a Russian region" // Journal of Comparative Economics, 31 (2003), 20-33
[5] Zhuravskaya E.V., "Incentives to provide local public goods: fiscal federalism, Russian style" //Journal of Public Economics, 76 (2000), 337-368

changes in the earned revenues of the local budgets are practically fully absorbed one way or another by the opposite changes in the grants allocated from the higher-level budgets.

Publications of the Institute for the economy in transition (IET)[6] on the relationships of the federal center with the regions from the same perspective show that the lack of negative fiscal incentives are evidenced by the results of the study of correlation between the fiscal revenues of the regional budgets and the size of grants for the period from 1994 to 2000. Again, as was shown in the above works allocation of grants from the federal budget was targeted to breaching the gap between the projected revenues and expenditures of regional budgets. Besides, the lack of negative incentives was attributed to the fact that any increases in the financial aid were directed to increase the public spending i.e. provision of public goods. Accordingly, they arrived at the conclusion that within the existing system of fiscal federalism it was possible to develop a mechanism of funds distribution that would not lead to any drop in taxes collectability.

Despite a great many of profound studies into the subject matter a number of major issues are yet to be addressed which fact has enabled us to dig a niche of our own and analyze what in our opinion represent bottlenecks.

The analytical method applied to the "regional budgets/local budgets" relationships in the publications of G. Kurlyandskaya, M. Alexeev and E. Zhuravskaya was extended to the relationships of the federal center with the regional budgets.

In the above papers the financial aid drivers were viewed as one group. For instance, the IET publications focused primarily on the analysis of correlation between the grants and departure of the actual regional budgets performance vis-à-vis revenues/expenditures from the planned numbers while the variables accountable for the political orientation were simply disregarded.

On the other hand, D. Treisman[7] has introduced a measure of the negotiating capacity of regional elites; much attention was paid to the impact of various threats of ethnic separatism on the size of aid granted. In his article "The Politics of Intergovernmental Transfers in Post-Soviet Russia" he is trying to tie the greater amount of aid not only to the objective need in the budget subsidies but to a special interest of the federal center in such regions and to their lobbying capacity as well.

In his works dedicated to analysis of the decentralization drivers in Russia A. Timofeev[8] opined that not infrequently the regional authorities deciding on the degree on independence from the federal center pursue exclusively political ends at the expense of economic benefits from decentralization.

In our work we are trying to clarify the definitions and provide a more precise classification of all hypotheses. Besides, the theoretical typology of the hypotheses has enabled us to consider all possible effects of the grants on the economic incentives and test out the findings against extensive statistical information.

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[6] P. Kadochnikov, S. Sinelnikov-Murylev, I.Trunin.
[7] Treisman Daniel “The Politics of Intergovernmental Transfers in Post-Soviet Russia”//British Journal of Political Studies, 26, 299-335
[8] Timofeev A. “Determinants of Decentralisation within Russian Regions”//Open Society Institute, 2003, Discussion Papers

2.2. Forms of distorting effects

Considering the described limitation of the above publications on distorting effects we were trying to analyze in our work the maximum number of factors that might potentially affect or be affected by the size of grants, i.e. factors driving the translation of the subsidies into improvement of the living standards, defusion of social strain and enhancement of the investment appeal of the region. First of all we performed a correlation analysis to specify the required models as a lead-up to a regressive analysis and a more complex econometric modeling.

Let us consider the factors affecting and being affected by the size of financial aid. In the most simplified form it looks as follows:

Grant = f (government functioning expenditure (+);
Industry and SME expenditures (+);
Social sphere expenditures (+);
Own fiscal revenues of the region (-))

In is assumed that *own fiscal revenues of the region* should be *positive vis-à-vis expenditures of prior years*, especially, as far as industry and SME expenditures are concerned. The presence of such relationship is indicative of efficiency of expenditures and the grant transformation into the development of the regional tax base.
We can also consider variables connected with bargaining power of a region and federal center preferences as exogenous factors that cause the variance of a grant.
The formal methodology of the grants calculation ties its size to per capita allocation of fiscal resources, projected rather than actual; however, as was mentioned above, numerous studies have proved a recompensing character of the grants that cover for the unfunded portion of the regional spending[9].

Accordingly, *criteria of stimulating/destimulating effects of supporting grants* automatically follow from the above representation. *Firstly, increment of the grant should not represent a mere recompense for the drop in the region's own fiscal revenues. Secondly, it should not lead to a decrease in the portion in the region's consolidated budget spending allocated to the industries. Thirdly, it should give rise to an increment of deferred fiscal revenues.*

Presentation of the material will follow a principle of consecutive testing of the existing hypotheses regarding the destimulating effect of the grants, performance of the regional spending, relationship between the region's political orientation and the size of aid, etc.

All hypotheses regarding the effect of intergovernmental grants may be divided into those admitting or not admitting whatever effects they have on the regional authorities' incentives, with those admitting such an effect being further divided into stimulating and destimulating effect assumptions.

[9] Under this methodology FFRS funds are allocated based on the fiscal revenues ratio adjusted for the index of fiscal potential and index of budget spending. In their turn the above indices include adjusting ratios for industrial structure and level of tax burden; structure of people's expenditures. Consequently, comparison of the budget support and the region's spending needs represent the difference between the regional budgets revenues and expenses.

We will test the veracity of each of the above hypotheses based on the data reflecting the *consequences of the activities* of regional authorities that may opt for different behavioral strategies given the conditions created as a result of the rules of the game adopted by the federal center in allocating grants for horizontal realignment. As the information describing such consequences reflects not only the strategies of the regional authorities, but the impact of other factors as well, we need to strip these data off the latter's impact.

Obviously, the selection of a certain behavioral strategy may have different consequences for the regional bureaucracy. For example, where rules of the game suppress any incentives to grow (a likely scenario if the provision of grants meets the principle "the worse the socio-economic situation, the greater the amount of grant"), no wonder that the regional authorities would opt for the strategy whose principles will be "take the aid, remain in the recipients' group, do not step up fiscal efforts and do not develop the tax base". This in turn would deteriorate the investment appeal of the region, aggravate the social situation, and, eventually, trigger a series of audits by fiscal authorities with the almost imminent change of the regional administration head.

On the other hand, if the grants distribution criteria heighten incentives to develop the region and are economic and investment-friendly, there is another set of behavioral strategies. It is possible, for instance, to direct the entire grant to the regional spending but the money channeling is at the sole discretion of the regional authorities. Increment of the federal grants may signify either an increase of allocations to industrial development, SME support, social programs, or to the functioning of administrative system.

Accordingly, assumptions regarding the grants effect on the regional authorities' behavior are based on the behavioral strategies described below (see Table 1).

Table 1. Typology of hypotheses

		Grants impact		
		With distorting effect		W/o distorting effect
		Encourage economic activity	Suppress economic activity	
Regional elite strategies	Proactive	**1.1**	1.2	1.3
	Selectively-proactive	**2.1**	2.2	**2.3**
	Reactive	3.1	**3.2**	**3.3**

The proactive attitude means development of all industries and sectors of the regional economy with simultaneous intensification of measures to ensure better taxes collectability and the shift in the policy from being primarily socially-centered to being focused on the development of economy and the raising of living standards.

Selectively-proactive attitude means priority support of a number of businesses directly or indirectly linked to the authorities. It might be enterprises or entire industries having a significant lobbying clout by virtue of business involvement in the executive structures or vice versa, the presence of public officers on the boards of large companies.

As for reactive posture its only objective is to meet the social sphere needs. The fact that the tax base is not expanded does not count. Such strategy is typical for recipient regions that for years have been living on grants from the federal center.

Consequently, in each case the grant may have a different impact on the strategy of regional authorities, the distorting effect may be equal to "zero", or with (+) or (-) sign. Every option represents an independent hypothesis that we have tested against the following measures:

1.1 (1.2) – significant positive (negative) correlation between the size of the grants and indicators of regional growth, development of tax base, magnitude of fiscal efforts.

1.3 – rejection of hypotheses 1.1 (1.2) based on statistics.

Proactive stance of the regional authorities features a positive correlation with the size of grants both in terms of spending (especially, allocations to industry development and SME support) and fiscal revenues of the regional consolidated budget. There should not be any decline in allocations to the industries and SME.

There is a positive correlation between expenditures on the cost items and the respective growth rates (e.g. expenditures on industry or percent of industry expenditures in the total spending and index of industrial production) that proves the efficiency of budget spending and intergovernmental grants.

Proactive stance of the regional authorities also means support of market competition and cannot be associated with the violation of Articles 7-8 of the federal Law on Competition. Finally, such regions (that assumed the proactive stance) boasts low indices of administrative corruption and government or business takeover.

2.1 (2.2) – as in 1.1, significant positive (negative) correlation between the size of grants and regional growth indicators. But unlike the regions encouraging the development of the entire economy, the regions pursing a selectively-proactive strategy put much reliance on administrative clout, not infrequent are instances of administration involvement in business and vice versa. High indices of administrative corruption may be accompanied by a significant political component of investment risk.

There might be a positive correlation between the size of the grants and spending for the industry development or percentage of industry expenditures in the total spending with a simultaneous decline of the fiscal revenues of the consolidated budget.

Finally, priority support of certain industries or businesses will be evidenced by numerous violations of the federal Law on Competition.

2.3 – rejection of hypotheses 2.1 (2.2) based on statistics.

3.2 (3.1) – significant negative (positive) correlation between the size of grants and industry development spending.

In this instance one may anticipate a negative relationship of the size of the grant with both fiscal revenues and the industry portion in the total spending. Added to this are the priority growth of allocations for the social sphere and administrative functions at the expense of

allocations to the industries and SME, the lack of correlation between the budget spending and investments in the fixed assets is indicative of the destimulating and distorting effect of the federal grants.

Inefficiency of the budget spending will be evidenced by both the lack of correlation between the size of grants and the economic growth and the lack of correlation between the industry spending and the industrial production index.

Reactive strategy may feature a gaming factor whereby regional authorities are focused on indicators having nothing to do with the meeting of a real objective (economic development, expansion of tax base).

3.3 – rejection of hypotheses 3.2 (3.1) based on statistics.

The criteria behind determination of the size of grants are to a great extent responsible for the latter's possible destimulating effect. The so called incremental budgeting which is based not so much on the economic rationale but on the achieved budgeting level is one of the chief drivers of the negative destimulating effects. This finding is tenable and so is hypothesis 3.2.

It is possible to determine whether the size of grants reflects the objective need of the region in monetary resources or it is calculated proceeding from the simplified criteria (policy incrementalism). Or whether it remains to be, like has always been, the subject of bargaining between regional authorities and the federal center (if this is the case the size of the grant will be influenced by political factors such as political leaning of the region manifested through the majority of votes cast in the president, governor and the State Duma deputies elections) [10].

2.2.1. Gaming

Let us discuss the gaming effect in greater detail. Gaming arises where and when the efficiency criteria promulgated within the framework of the government policy come at variance with the goals pursued by that same policy. In our case the presence of gaming helps to properly define both the system of supporting grants and the performance criteria of the regional budget spending.

Let us consider the center/regions relationship from the principal/agent models perspective[11]. Under the system where financing of the budget meets the real needs in funds we will see a high positive correlation between expenditures and the respective funding. Likewise assumptions about the correlation between the rated and specific indices also prove tenable. For instance, SME expenditures should be materially correlative with not only the number of medium and small enterprises but their output as well, while the portion of SME expenditures in the consolidated budget should be correlative with the SME share in the total industrial output, etc.

[10] See publications of Treisman, Crain.

[11] See Spence, M. and R. Zeckhauser (1971). Insurance, information and individual action. *American Economic Review* 61(2): 380-387;
Ross, Steven, (1973). The economic theory of agency: The principal's problem. *American Economic Review*, 63(2): 134-139

A situation may arise when the correlation between absolute figures is high, i.e. the number of enterprises and amount of funding are correlative but the evident speculations about specific indicators are not proved (e.g. funding is not tied to the size of the enterprise or the volume of its output). In this instance we might presume that in determining the amount of funds allocated to finance specific cost items, the regional authorities were guided by certain spending performance indicators or rates. Such arbitrary adjustment to meet the indicator leads to inefficient and unreasonable distribution of funds albeit finely reported on paper.

There could be yet another situation arising out of gaming: regional authorities readily spend additional funds on cost items whose performance can be easily measured. At the same time where such performance criteria are hard to develop or where the payback takes long the incremental relationship of the cost item in question vis-à-vis the growth of revenues (or grants) is negative (less than 1).

3. Empirical testing of hypotheses

This section is dedicated to empirical testing of the grants allocation criteria. In instances where the size of the supporting grants is largely targeted on absorption of spending obligations it is necessary to evaluate efficiency of the grants translation into fiscal revenues via the regional budget spending.

We will test the assumptions about the negative distorting effect of the supporting grants.[12]

In addition to the analysis of financial and economic drivers indicative of the level of regional development and reflecting regional disparities our testing will include variables related to the political leaning of the regions, various indices of the administrative corruption, expert evaluations of their investment potential and investments risks.

The underlying database has been formed from various sources. These are the official data published by the State Statistical Committee of the Russian federation, Center for Fiscal Policy, Ministry of Taxation of the Russian federation, Ministry of Finance, Federal Antimonopoly Service (violations of Articles 7-8 of the Federal Law on Competition), as well as the data of the Central Election Committee. All expert estimates are imported from the region ratings of investment risks and investment potential (RA-Expert), and INDEM Foundation polls.

Variables (for a complete list see Appendix 1) have been grouped into the following blocks:

- Regional demography variables;
- Social sphere variables (living standards, social strain, etc.);
- Resource sufficiency variables;
- Economic activity and production variables;
- Financing variables;
- Political orientation variables;
- Administrative corruption and administrative barriers variables;

[12] Besides, it is necessary to determine what can be considered as giving rise to negative incentives – couldn't it be the very fact that the region *has long been* a recipient of financial aid? Or the incremental growth rates of regional GDP or industrial output (which should have been higher than by regions on average as they started from the relatively low level) is lower than by regions on average?

- Block of expert estimates.

Expert estimates, being ordinal variables, reflect subjective judgments of respondents about the economic situation and the extent of the administrative corruption in the region. These are not based on the statistical information but in some instances represent more accurate assessment as expert estimates are unbiased, free from any kinds of manipulation and not prone to be influenced by statistical methodology, etc. Besides, they provide indirect assessment of hard to measure regional characteristics whose objective information is either inaccessible or nonexistent.

3.1 Criteria of FFRS Grant Allocation

To identify the criteria which determine allocation of financial aid, we analyzed the correlation between the grant size and the key regional indicators and built an econometric model linking the grant size with the region's own revenues and expenses and also with the transfers of prior years.

The data of the Fiscal Policy Center on the regional budgets for 2000-2002 prompted the timeframe of the survey. As there are no negative transfers (they are always positive for recipients and zero for the regions which do not require leveling off) we included only the recipient regions in the sample to avoid distortion of the transfer effect.

Analysis of dependence of the 2002 FFRS grants on the 2001 tax revenues (which could be taken as projections for 2002) has shown how this dependency changes when the effect of expenses is excluded (Table 2).

The grant amount is also closely linked with the regional budget deficit (which we calculated as the difference between the consolidated budget expenses and own revenues). High dependence on the grant values taken with a time lag may indicate a significant lag in the transfer amount determination.

Table 2. Ratios of double and partial coefficients of correlation between the FFRS grant amount and regional budget indicators, 2002

	FFRS grants in 2002
FFRS grants in 2001	0.95*
FFRS grants in 2000	0.90*
Budget deficit in 2002	0.57*
Budget deficit in 2001	0.38*
Tax revenues in 2001	0.04
Tax revenues in 2001 excluding the effect of the 2001 expenditures	-0.64*
Consolidated budget expenditures in 2001	0.23
Consolidated budget expenditures in 2002	0.23
Regional GDP in 2001	0.06
Industrial production in 2001	-0.06
* significant at 0.05	

Source: State Statistical Committee, Fiscal Policy Center, own estimates

A weak correlation between the FFRS transfer amount and such indicators as regional GDP and industrial production indicates that both the region's potential and its liabilities are taken into account in estimating the size of financial aid. It was not our intension to describe all the factors that influence the size of a grant. Our aim was to model the relation between tax revenues and financial aid of the prior period, assuming that the size of a grant is defined by regional budget deficit and forecasted regional revenues and expenditures.

The correlation analysis conclusions were used to formulate the pattern of financial aid determination. Let us assume that the grant size is determined on the basis of the prior year amount and the budget income and expense projections for the current year. Let us also assume that tax revenues depend on the regional budget expenditures with a time lag and, therefore, on prior year transfers. Therefore, the following *system of equations* should be reviewed to establish the links between the variables.

Thus, the following figures were obtained for 2002:

System 1

FFRS grants (2002) = 1,079,489 + 0.46·budget spending (2001) – 0.63·tax revenues (2001)
(R2 = 0.44; t-statistics 4.72; 7.27 and –6.88 respectively)

Tax revenues (2002) = 2,535,645 – 1.59·FFRS grants (2001) + 4.77·expenditures on the industries and small and medium business (2001)
(R2 = 0.69; t-statistics 3.49; -4.02 и 12.47 respectively).

For comparison - **System 2,** where the grant amount is determined by proper values with a time lag.

FFRS grants (2002) = 218,724.8 + 1.26· FFRS grants (2001)
(R2 = 0.94; t-statistics 2.97; 31.41 respectively)

Tax revenues (2002) = 2,535,645 – 1.59· FFRS grants (2001) + 4.77· budget deficit (2001)
(R2 = 0.69; t-statistics 3.49; -4.03 и 12.47 respectively).

Or **System 3** where the grant amount is determined by budget deficit and tax revenues with a time lag.

FFRS grants (2002) = 535,315 + 0.65·budget deficit (2001) – 0.44·tax revenues (2001)
(R2 = 0.60; t-statistics 2.46; 9.91 and –8.70 respectively)

Tax revenues (2002) = 2,535,645 – 1.59· FFRS grants (2001) + 4.77· expenditures on the industries and small and medium business (2001)
(R2 = 0.69; t-statistics 3.49; -4.02 и 12.47 respectively).

Therefore, the models where the size of financial aid correlates with the budget deficit and prior year grant amounts has a greater forecasting ability when the determination ratio is concerned.

The negative correlation between the grants amount and tax revenues can be easily explained vis-a-vis the allocation criteria, but *the negative correlation between tax revenues and the prior year grant amount suggests the grants' distorting effect*.

This statement calls for an additional analysis and requires a separate survey, together with a review of the structure of expenditures.

3.2 Effect of FFRS grants and other intergovernmental transfers on the regional budgets and fiscal incentives

The first group of hypotheses to be reviewed is related to the effect of grants of FFRS and other funds on the incentives of regional authorities encouraging them to expand the taxable base and make additional fiscal efforts such as tax revenues per unit of industrial production and per capita tax revenues. Let us briefly discuss the findings about the key hypotheses (Table 3).

H1: there is a significant correlation between the share of financial aid in the regional consolidated revenues and the level of fiscal effort – no confirmation.

Table 3. FFRS grants – regional fiscal effort (2002)

	Fiscal effort indicator	
	Tax revenues per unit of industrial production	Per capita tax revenues
Share of FFRS grants in own revenues plus FFRS grants	0.04	-0.12
FFRS grant to regional GDP	0.23*	0.12
All transfers from other budget levels to regional GDP	0.32*	0.27*
Real income (% of last year level)	-0.44*	-0.38*
Industrial production index	-0.27*	-0.02
Regional budget industry development expenditures	-0.16	-0.05
Consolidated budget spending	-0.17	-0.06
* significant at 5%		

Source: State Statistical Committee, Fiscal Policy Center, own estimates

At the same time there is a significant *negative correlation between the tax revenues of the current period and the FFRS grants of the prior period* (partial correlation coefficient between the 2002 tax revenues and the 2001 transfers less the effect of the 2001 expenditures: –0.59). This prompted an analysis of correlation between an increase in tax revenues, on one hand, and an increased in the grant amount and expenditures on the industries and SME, on the other hand.

H2: increase in tax revenues significantly and negatively correlates with an increase in grants and the grant amount of the prior period – confirmed. Partial correlation coefficient between the increases is –0.25 (significant at 5%).

In addition to the equation describing the dependence of tax revenues on transfers of prior years, let us review the equation describing the dependence of increases in tax revenues on the grant size and increased expenses in prior years.

Increase in tax revenues (2002) = 564,685 – 0.18·FFRS grant (2001) + 0.37·increase in expenses (2001)
(R2 = 0.50; F-statistics = 35; t-statistics 3.15; -1.82 и 8.42 respectively)

As FFRS grants account on average for only 40% of all aid allocated to regional budgets from the budgets of other levels (including the regions not receiving FFRS grants) our review should be supplemented with an analysis of the effect of the rest 60% (variable "Other

intergovernmental transfers") on the spending and fiscal incentives of regional authorities. The effect of FFRS grants is completely different from that of other funds' grants. They are target funds and some of them provide subsidies, i.e. granted on conditions of co-financing expenses. They differ not only by the "lumpsum vs. target" criterion but also by the possibility to view other funds' grants as a permanent and forecasted source of revenues of regional budgets. Some grants of other funds do not have a formal methodology of estimate and can not be forecasted as adequately as the FFRS grants, and all other conditions being equal, they are less prone to distortions.

We did not have information on each fund and identified, out of all grants from other budgets, the transfers not related to leveling of budget support or financing of federal law enforcement efforts[13].

Table 4 presents the results of testing the assumption about the effect of "other transfers" on fiscal efforts – significant negative correlation.

Table 4. Coefficients of partial correlation of tax revenues and other grants excluding the effect of budget expenses in 2001

	Other grants, 2001
Tax revenues, 2002	-0,62*
Increase in tax revenues, 2002	-0,21*
*significant at 5%	

Source: State Statistical Committee, Fiscal Policy Center, own estimates

Below is the equation similar to the one calculated for FFRS grants.

Increase in tax revenues (2002) = -84,556 – 0.09·(total of FFRS grants and other grants) + 0.53·increase in expenses (2001)
(R2 = 0.80; F-statistics=140; t-statistics –0.63; -1.90 и 15.88 respectively)

In our opinion, the above data and calculations confirm the hypothesis about the emergence of negative fiscal incentives. Apparently, tax collectability, unlike expenses, depends on the grants indirectly and is influenced by many factors related to the budget expenses performance (including expenditures on industry development). At the same time the above calculations have shown that increases in tax revenues in recipient regions on average negatively correlate with the grant size.

3.3 Correlation between supporting grants and regional budget expenses. Analysis of the spending functional structure

It would be interesting to test the following assumptions about the regional budget expenses. First of all, to what extent regional budget expenses depend on the grant amount, or are they prompted by the region's requirements and the grant just compensates the deficit of funds? Second, does the structure of expenditures depend on the grant amount? Does the weight of various expense items change in response to an increase in the supporting grant?[14]. Third,

[13] We failed to identify the grants of the Compensation Fund.
[14] Three groups of expenses are identified. The first group includes expenses on legislative (representative) government bodies, executive government bodies, law enforcement bodies, public prosecution service, and fire fighting service. The second group includes expenses on the development of industries, small business, construction, architecture, rehabilitation of mineral resources, agriculture, fishing, road construction and

how effective are the regional budget expenses and are the grants successfully translated into industry development expenditures and growth of fiscal revenues?

H3: There is a high correlation between budget expenses and the amount of grants in the current year grants – confirmed (Table 5).

H4: There is a high correlation between an increase in the expense items of regional budgets and increased FFRS grants – confirmed (Table 6).

H5: A decrease in subsidies leads to a decrease in the share of industry development expenses – confirmed (Table 7). Moreover, there is an inverse relation between industry development expenses and some other expense items, i.e. in poor regions social and administrative expenditures are increased at the expense of the funds allocated to the industry development and SME support.

Table 5. Grant amount vs. expenses of consolidated budgets, 2002

	2002 FFRS grant	2001 FFRS grant	Other 2002 grants	Other 2001 grants
Regional consolidated budget expenses	0.23*	0.29*	0.75*	0.79*
Administrative expenses	0.21*	0.24*	0.78*	0.76*
Industry development expenses: construction, transport, communications, SME	0.43*	0.47*	0.91*	0.85*
Utilities, health care, culture, education, youth, sports, media	0.28*	0.31*	0.72*	0.78*
* significant at 5%				

Source: Fiscal Policy Center, own estimates

Table 6. Increase in grant amount vs. increase in consolidated budget expenses, 2002

	Increase in 2001 FFRS expenses	Increase in other 2001 expenses
Increase in regional consolidated budget expenses	0.27*	0.77*
Increase in administrative expenses	0.26*	0.46*
Increase in industry development expenses: construction, transport, communications, small business	0.17*	0.66*
Increase in expenses on housing and utilities, health care, culture, education, youth, sports, media	0.34*	0.46*
* significant at 5%		

Source: Fiscal Policy Center, own estimates

Table 7. Changes in the weight of expense items depending on the other grants' growth rate

	Rate of increase in 2001 FFRS expenses	Rate of increase in other 2001 expenses
Administrative expenses	-0.03	-0.50*
Industry development expenses: construction, transport, communications, small business	0.05	0.23*
Housing and utilities, health care, culture, education, youth, sports, media	-0.06	-0.30*
* significant at 5%		

Source: Fiscal Policy Center, own estimates

maintenance, land, water, and forest resources, transport and communications. The third group includes expenses on housing and utilities, health care, culture, education, youth, sports and media.

The results obtained have shown that there is a high and positive correlation between regional budget expenses and grants of prior years although they are more sensitive to the size of other funds' grants. Therefore, the system of equations for assessment of interdependence of grants, expenses and tax revenues of regional budgets can be adjusted to include one more equation:

Industries and small business expenses (2002) = 51,706 + 0.12· FFRS grants (2001) + 0.85·industries and SME expenses (2001)
(R2 = 0.85; t-statistic 0.56; 2.38 и 17.77 respectively).

Further analysis is connected not so much with the effect of intergovernmental transfers as with the evaluation of regional expenditure performance and an attempt to answer the question: even when the federal aid is allocated to increase the regional budget spending will it lead to improvement of economic indicators? In other words, how effective are the regional budget expenses and is such form of subsidies reasonable?

It was found during the study of effect of industry development expenses on economic activities and SME development that there is a high and positive correlation between the funds allocated to SME and the number of small businesses without any bearing on the average size of businesses, share of small business in industrial production, etc.:

- rate of correlation between the funds allocated to SME and the number of small and medium businesses: **0.84** (for the 2001 expenses and number of small and medium businesses in 2002: **0.89**);
- rate of correlation between the funds allocated to SME/private enterprise and the share of small and medium businesses in the overall number of enterprises in 2002: 0.18 (for 2001: -0.0006);
- rate of correlation between the specific expenses on SME and the number of small and medium businesses: -0.04 (for specific expenses of 2001 and number of small and medium businesses in 2002: -0.03);
- rate of correlation between specific expenses on SME and share of small and medium businesses in the total number of businesses: -0.02;
- share of expenditures on SME/private enterprise and industrial production (industrial production index) 0.12 (0.01);
- expenditures on industry development and industrial production: 0.56;
- share of expenditures on industry development and industrial production (industrial production index): -0.16 (-0.28).

Therefore, the share of regional expenditures on SME does not depend on the share of small and medium businesses in the total number of industrial enterprises in the region. It can also be said that the regions do not pursue the SME development policy (which would be evidenced by a negative coefficient of "share of small business in the total number of enterprises to the share of funds allocated to SME in the budget expenses". Rather, the funds are allocated by the following principle: a definite amount for each small or medium business. Such financing results in a negative correlation between the share of funds allocated to industrial enterprises and industrial production, which proves the inefficiency of this expense item.

3.4 Correlation between the grant size and characteristics of the recipient region. Administrative corruption. Investment and political risks

This section deals with the effect exerted on the size of the grant by the political variables: regional level of social strain (indicated by the number of strikes at industrial enterprises) or political orientation of the region.

Within the review of the expenses' functional structure, particularly interesting is the link between the administrative expenses and socio-economic indicators of the region (Table 8). It is only natural to trace the links between this item and various indices of administrative corruption, investment and political risks and the authorities activities intended to restrict competition (Art. 7-8 of the Law on Competition).

Table 8. Administrative expenses vs. economic indicators, 2002

	Share of administrative expenses in the consolidated budget expenses
Real incomes of the population (index)	-0.38*
Industrial production index	-0.34*
Share of SME in the total number of enterprises	-0.33*
Legislative component of investment risk	0.22*
Investment potential	-0.24*
* significant at 5%	

Source: State Statistical Committee, Fiscal Policy Center, RA-Ekspert, INDEM Fund, own estimates

Table 9. Share of expenses on industry development vs. economic indicators, 2002

	Share of industry development expenses in consolidated budget expenses
Unemployment rate	0.55*
Regional per capita GDP	-0.25*
Industrial production index	-0.27*
Share of FFRS grants in the region's revenues	0.27*
* significant at 5%	

Source: State Statistical Committee, Fiscal Policy Center, own estimates

The identified correlations demonstrate that the worse the economic situation in the region and the bigger the amount of granted funds the higher the share of administrative expenses in subsidized regions.

Expenditures on industry development and construction also negatively correlate with the industrial production index and regional per capita GDP (Table 9). The significant and positive correlation with unemployment rate confirms the assumption about inefficiency of the current investment and industrial policies in the recipient regions.

We wanted to understand how administrative restrictions and administrative corruption affected the regions' economic development and how corruption is connected with the size of grants received by the region. Therefore, we analyzed how businessmen evaluated various types of corruption and cases when business seized power or found itself under illegal control (INDEM data).

Even though the used indices and rates are expert estimates, they give an idea of the correlation between the size of aid and:

- administrative corruption rate (extortion);
- state capture index (purchase of administrative decisions by businessmen);
- business capture index (illegal control over business established by officials in excess of authority).

The table below presents the correlation of indices with regional characteristics.

Table 9. Corruption indices vs. economic indicators, 2002

	Administrative corruption rate	State capture index	Business capture index
Share of FFRS grants in own revenues of the region with FFRS grants (before income tax)	-0.22	-0.02	-0.16
Share of other transfers in own revenues of the region	-0.26	-0.11	-0.07
FFRS grant amount	-0.02	**0.34**	**0.33**
Other grants' amount	**0.43**	**0.20**	**0.27**
with regional per capita GDP	-0.08	-0.12	0.01
with industrial production index	-0.08	-0.04	-0.15
with investment potential	0.20	0.06	0.11
with share of fuel and metallurgy in industrial production (%)	-0.18	-0.15	-0.06
with share of expenditures on industries, construction, transport, communications, small business, etc.	0.20	0.03	0.17
with share of expenditures on government authorities, law enforcement bodies, public prosecution service and fire fighting service	0.23	0.20	**0.26**
with share of small and medium business	**-0.25**	-0.09	-0.18
with small business growth rate	-0.13	**-0.27**	-0.17
with share of allocations to small business	**-0.28**	-0.17	-0.10
Violation of Art. 7 of the Law on Competition	0.23	0.14	**0.25**
with investment potential index	0.20	0.06	0.11
with investment risk index	-0.18	0.06	0.19
*10% significance for 42 observations ~0.25			

Source: State Statistical Committee, Fiscal Policy Center, RA-Expert, INDEM Foundation, Federal Antimonopoly Service, own estimates

Such results as a significant and negative correlation between administrative corruption index and the share of SME (-0.25) and share of expenditures on SME (-0.28); a significant and positive correlation with violation of Art. 7 of the Law on Competition (0.25), a significant and positive correlation with the share of expenditures on government authorities (0.26), a significant and positive correlation with the size of other funds' grants (0.42 and 0.27) do not contradict the main assumptions. In fact, the higher the rate of administrative corruption in the region, the worse the business climate, the less developed private enterprise and the more expenditures on government authorities. The higher the investment potential, the more frequent the instances of extortion by officials (with Moscow region in the lead in this respect).

It has also been confirmed that corruption flourishes in the areas where large budget funds are allocated: high positive correlation between above indices and the absolute values of grants.

It should be noted that there is no significant correlation between the share of fuel and metallurgy industries, on one hand, and both the business takeover index and the government takeover index, on the other. The assumption that the richer the region the higher the rate of administrative corruption was not proved either.

Based on the significance criteria we rejected the hypotheses on the correlation between the corruption indices and investment potential and investment risk indices:

- H9: the higher the investment potential the more extortion cases;
- H10: the higher the investment risks the lower the administrative corruption rate;
- H11: the more cases of government control over business, the higher the investment risk.

All these hypotheses were not proved.

And last but not least, let us review the expert estimates, i.e. subjective assessment of business climate in recipient regions.

It should be noted in respect of risk range that there is a high and negative correlation between the major part of grants and the social, economic and financial ranges of investment risk (and not with the legal, political or criminal ones).

We also have identified a positive correlation between the share of grants and the political orientation of the electorate, i.e. the number of votes for the Yedinstvo party at the 2003 election: 0.41 for the share of FFRS grants in own budget revenues and 0.38 for the share of other funds' grants.

In our opinion, this is due to the fact that the regions receiving significant grants are “content” with the status qua and do not wish significant political transformations. Still, the grant size is determined by economic factors and the level of social strain, not by the pressure from separatist regional authorities (see Treisman). A high level of social strain is associated not with the strikes (this variable proved insignificant) but with low living standards.

Therefore, a typical grant recipient region is characterized by a high level of administrative corruption and business takeover, low level of expenditures on industry development and low performance of such expenditures, and high economic and social risks.

In such regions the growing transfer flows lead to an increase in both expenses and tax revenues and result in lower tax revenues in subsequent years.

Conclusions

Analysis of intergovernmental transfers has revealed a distorting effect of grants on the fiscal incentives of regional authorities in respect of lowering tax revenues of future periods and the growth of tax revenues. In our opinion, this is due to the fact that the FFRS grant determination methodology does not include mechanisms stimulating the region to increase its fiscal efforts and develop the taxable base. Even the official methodology of the RF Ministry of Finance only provides for covering regional budget deficit and the grant size is based on the past values.

We failed to reveal a correlation between the grant size and political factors, i.e. regional electoral preferences. The grant size is most probably based on socio-economic factors and actual financial needs of the region.

Lack of positive fiscal incentives explains the insignificant correlation between the improvement of the region’s economic situation and the volume of financial aid. Apparently,

this is due to the low performance of expenditures on the government authorities and industry development.

Both in expenditures and fiscal policies the regional authorities are guided by specific performance indicators: amount of collected taxes, tax collectability, per capita tax revenues (including with the value of consumer goods basket), tax revenues per taxable unit. Therefore, the efforts of the regional authorities are not directed at the development of taxable base but at the achievement of another goal, i.e. to ensure specific collectability *not lower than a designated level*.

In general, our survey has shown that regions with favorable initial conditions are growing faster, and there is no positive correlation between the economic growth and the size of grants. Therefore, both the leveling policy and the budget policy as a whole are inefficient.

A different mechanism of financial aid distribution is needed to make it stimulating so that the regions shift from a passive strategy to a strategy of tax base development. Methodology of determination of the grant size should include an incentive for increased tax revenues or economic growth, i.e. the grant's size should be tied not only to the regional budget deficit but also to the growth of tax revenues. For example, incentives for increasing tax collectability could be created by including in the intergovernmental transfers part of federal regulating taxes (which is common in most countries). Moreover, this would ensure a more precise evaluation of the income centralization level in Russia.

In this respect, other funds' transfers provide for great opportunities than the FFRS grants as other funds are not prompted by the need to eliminate revenue gaps. Therefore, allocation of such grants could be based not only on how bad the economic situation in the region is but also on the economy growth indices or increase in expenditure performance.

Development of recommendations as to how to increase the efficiency of intergovernmental relations prompts a more detailed survey using mathematical modeling and multicriteria optimization methods. Of great importance will also be a review of international experience in intergovernmental relations.

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Appendix 1

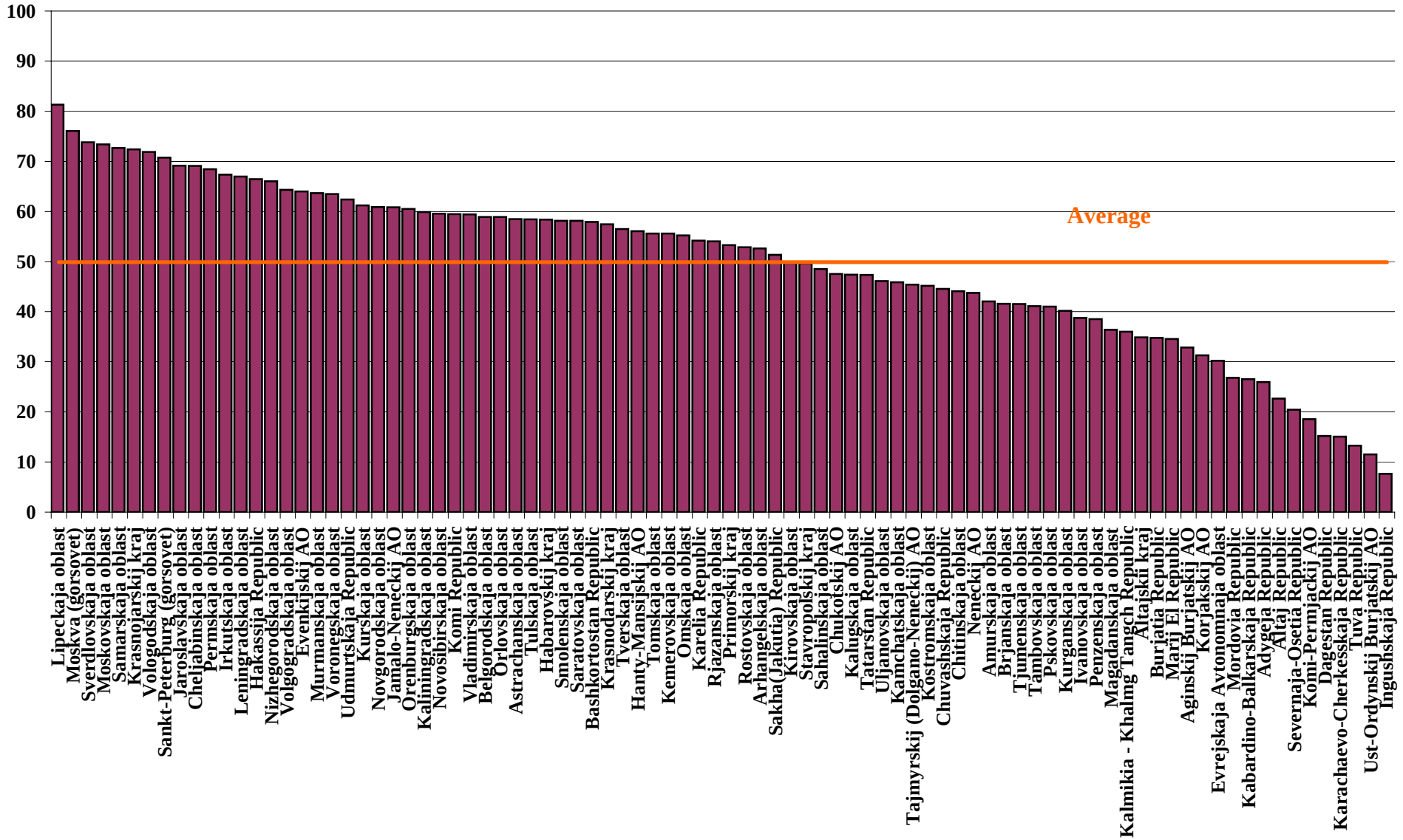
List of Variables

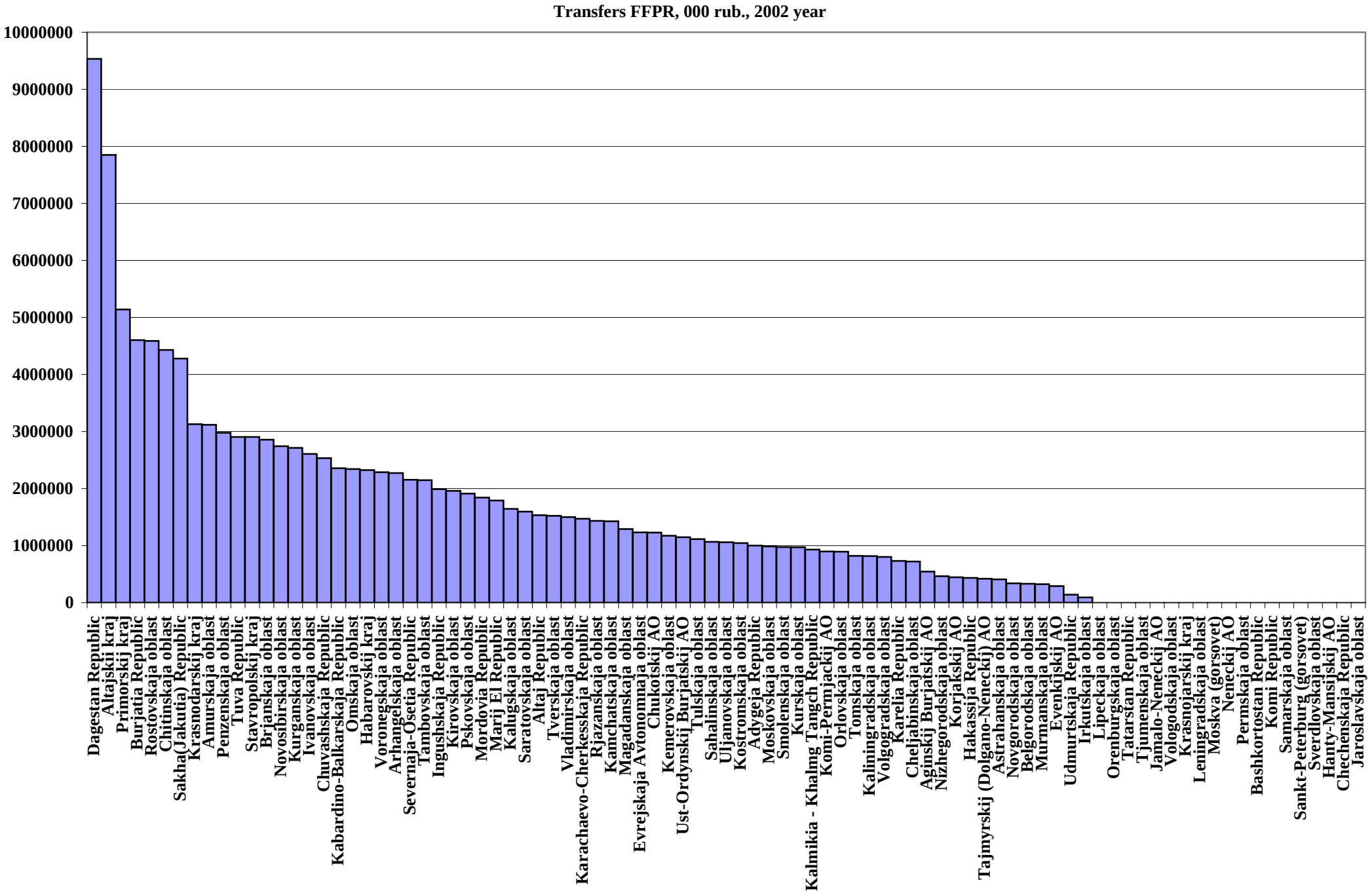
Численность населения тыс.	population
Плотность населения на 1 км2	population density
Доля городского населения,%	share of urban population
Миграция населения, чел	migration
Коэффициент миграционного прироста (на 10000 чел.)	coefficient of migration
Численность занятых в экономике, тыс. Чел	number of employed
Численность безработных, тыс. Чел	number of unemployed
Уровень безработицы	unemployment rate
Число организаций, на которых прошли забастовки	number of organizations that strikes
Среднедушевой денежный доход, в месяц (руб)	income per capita
Доля семей, получивших субсидии на оплату ЖКУ, %	subsidies for utilities and housing
Индекс потребительских цен	consumer price index
Стоимость фиксированного набора товаров и услуг (в рублях)	consumer basket (costs of fixed set of products)
Прожиточный минимум	living wage
Реальные денежные доходы населения (в процентах к предыдущему году)	real income
Индекс Джини	Gini coefficient
ВРП, млн.руб	regional GDP
Доля топливных отраслей и металлургии в промышленном производстве (%)	share of fuel and metallurgy in industrial production
в т.ч электроэнергетика	including electricity
в т.ч топливная	including fuel
в т.ч черная металлургия	including ferrous metallurgy
в т.ч цветная металлургия	including nonferrous metallurgy
в т.ч химическая и нефтехимическая	including oil and chemistry
Объем промышленного производства, млн.руб до 1998 млрд руб.	industrial production
Индекс промышленного производства (в % к предыдущему году)	industrial production index
Доля малых от общего числа предприятий (%)	share of small and medium enterprises
Основные фонды, млн.руб	production funds
Инвестиции в основной капитал, млн.руб	investment
из инвестиций в ОК доля привлеченных средств, %	outside funds (investments)
Ранг риска ("Эксперт")	range of risk
Ранг потенциала ("Эксперт")	range of potential
Ранги составляющих инвестиционного риска в 2001-2002 гг.	
законодательный	range of legislational risk
политический	range of political risk
социальный	range of social risk
экономический	range of economic risk
финансовый	range of financial risk

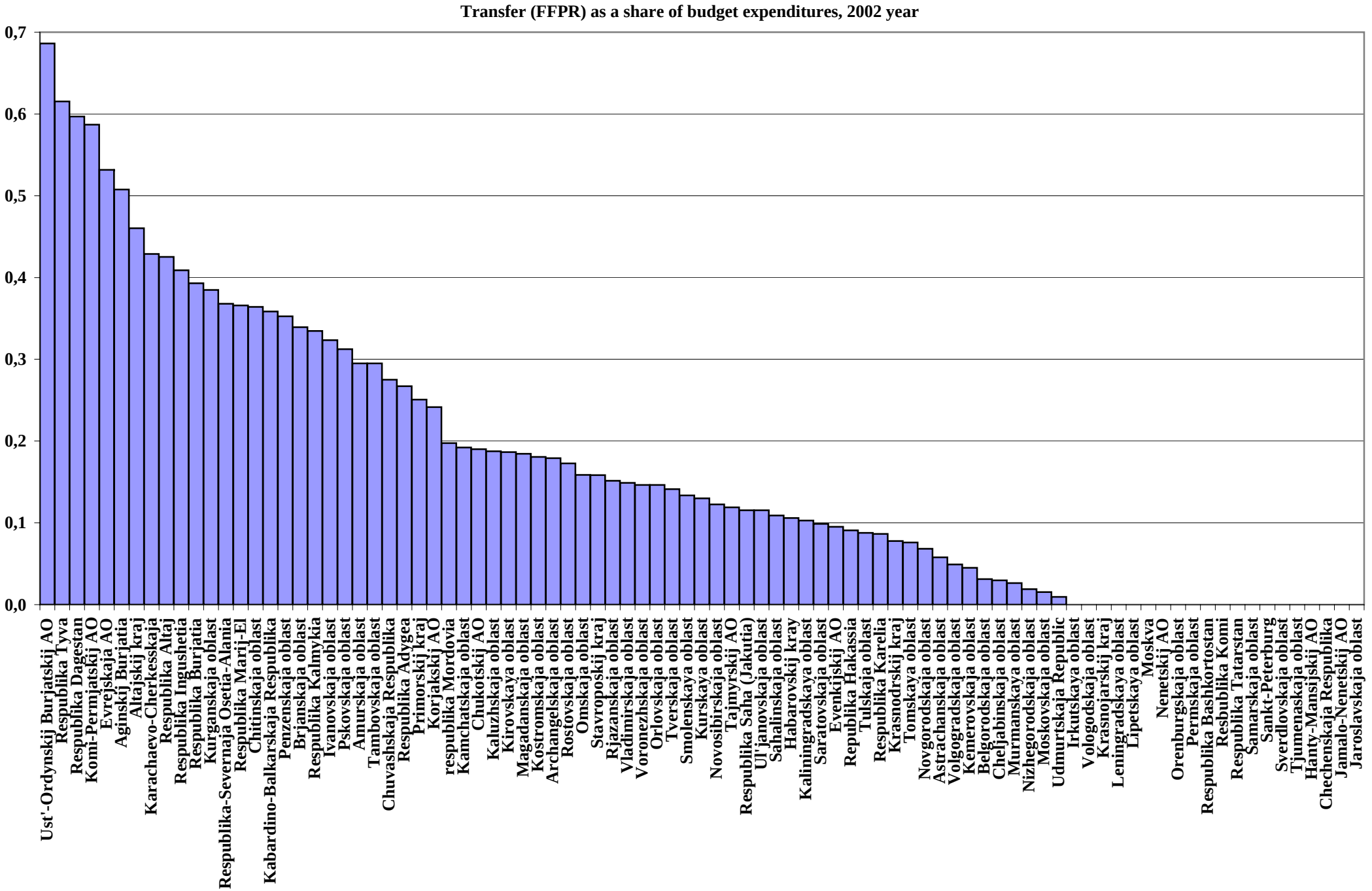
криминальный	range of criminal risk
экологический	range of ecological risk
Ранги составляющих инвестиционного потенциала в 2001-2002 гг.*	
трудовой	range of labor potential
потребительский	range of consumer potential
инфраструктурный	range of infrastructure potential
производственный	range of production potential
инновационный	range of innovative potential
финансовый	range of financial potential
институциональный	range of institutional potential
природно-ресурсный	range of resources potential
Акты и действия органов власти, направленные на ограничение конкуренции (ст.7) (рассмотрено заявлений)	restrictive business practice: violation of Competition Law by regional administration, article 7 - examined claims
возбуждено дел (всего, 2+7)	Competition Law, article 7 - suits initiated
Соглашения органов власти, ограничивающие конкуренцию (ст.8) (рассмотрено заявлений)	restrictive business practice: violation of Competition Law by regional administration, article 8 - examined claims
возбуждено дел (всего, 2+7)	Competition Law, article 8 - suits initiated
Доля голосов, поданных за "Единство" в выборах 2003 года/ либо другая подобная переменная	political orientation (share of voices for the "Yedinstvo" party)
Собственные доходы регионов (с учетом налога на прибыль), тыс.руб	own revenues
Налоговые доходы региона	tax revenues
Доля налоговых доходов в собственных доходах субъекта	share of tax revenues in own revenues
Дотации на выравнивание бюджетной обеспеченности (трансферты ФФПР), тыс.руб.	equalization transfer (FFRS)
Прочие трансферты	other transfers
безвозмездные перечисления из бюджетов др. уровней	all transfers from budgets of other level
Доходы консолидированного бюджета субъекта, тыс. руб.	consolidated budget revenues
Расходы консолидированного бюджета субъекта, тыс. руб.	consolidated budget expenditures
расходы на функционирование органов государственной власти, органов внутренних дел, органов прокуратуры и государственной противопожарной службы	expenditure on administration, public authorities, public prosecution
расходы на промышленность, строительство, архитектуру, воспроизведение материально-сырьевой базы, сельскохозяйственное производство, рыболовное хозяйство, дорожное хозяйство, водные, лесные, земельные ресурсы, транспорт, связь, малый бизнес	expenditure on industry, small and medium enterprises, transportation, construction, agriculture, restoration of natural resources
расходы на жилищно-коммунальное хозяйство, здравоохранение, культуру, образование, молодежная политику, физкультуру, СМИ	expenditure on social sphere, public health, education, culture, youth policy
Отношение дотаций на выравнивание бюджетной обеспеченности и ВРП	transfer (FFRS)/Regional GDP

Отношение дотаций на выравнивание бюджетной обеспеченности и доходов консолидированного бюджета	transfer (FFRS)/budget revenues
Доля трансфертов из ФФПР в собственных доходах региона (без учета налога на прибыль) с учетом ФФПР	transfers (FFRS)/own revenues
отношение дотаций и расходов консолидированного бюджета субъекта	transfer (FFRS)/budget expenditures
индекс административной коррупции (Фонд Индем)	administrative corruption index (INDEM Fund)
индекс захвата государства (Фонд Индем)	state capture index (INDEM Fund)
индекс захвата бизнеса (Фонд Индем)	business capture index (INDEM Fund)

"Own revenues (including profit tax)/expenditures" ratio, 2002 year




Transfers FFPR, 000 rub., 2002 year
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
Dagestan Republic
Altajskii kraj
Primorskij kraj
Burjatia Republic
Rostovskaja oblast
Chitinskaja oblast
Sakha(Jakutia) Republic
Krasnodarskij kraj
Amurskaja oblast
Penzenskaja oblast
Tuva Republic
Stavropolskij kraj
Brjanskaja oblast
Novosibirskaja oblast
Kurganskaja oblast
Ivanovskaja oblast
Chuvashskaja Republic
Kabardino-Balkarskaja Republic
Omskaja oblast
Habarovskij kraj
Voronegskaja oblast
Arhangelskaja oblast
Severnaja-Osetia Republic
Tambovskaja oblast
Ingushskaja Republic
Kirovskaja oblast
Pskovskaja oblast
Mordovia Republic
Marij El Republic
Kalugskaja oblast
Saratovskaja oblast
Altaj Republic
Tverskaja oblast
Vladimirskaja oblast
Karachaevo-Cherkesskaja Republic
Rjazanskaja oblast
Kamchatskaja oblast
Magadanskaja oblast
Evrejskaja Avtonomnaja oblast
Chukotskij AO
Kemerovskaja oblast
Ust-Ordynskij Burjatskij AO
Tulskaja oblast
Sahalinskaja oblast
Uljanovskaja oblast
Kostromskaja oblast
Adygeja Republic
Moskovskaja oblast
Smolenskaja oblast
Kurskaja oblast
Kalmikia - Khalmg Tangch Republic
Komi-Permjackij AO
Orlovskaja oblast
Tomskaja oblast
Kaliningradskaja oblast
Volgogradskaja oblast
Karelia Republic
Cheljabinskaja oblast
Aginskij Burjatskij AO
Nizhegorodskaja oblast
Korjakskij AO
Hakassija Republic
Tajmyrskij (Dolgano-Neneckij) AO
Astrahanskaja oblast
Novgorodskaja oblast
Belgorodskaja oblast
Murmanskaja oblast
Evenkijskij AO
Udmurtskaja Republic
Irkutskaja oblast
Lipeckaja oblast
Orenburgskaja oblast
Tatarstan Republic
Tjumenskaja oblast
Jamalo-Neneckij AO
Vologodskaja oblast
Krasnojarskij kraj
Leningradskaja oblast
Moskva (gorsovet)
Neneckij AO
Permskaja oblast
Bashkortostan Republic
Komi Republic
Samarskaja oblast
Sankt-Peterburg (gorsovet)
Sverdlovskaja oblast
Hanty-Mansijskij AO
Chechenskaja Republic
Jaroslavskaja oblast


Transfer (FFPR) as a share of budget expenditures, 2002 year
0,7
0,6
0,5
0,4
0,3
0,2
0,1
0,0
Ust'-Ordynskij Burjatskij AO
Respublika Tyva
Respublika Dagestan
Komi-Permjatskij AO
Evrejskaja AO
Aginskij Burjatia
Altajskij kraj
Karachaevo-Cherkesskaja
Respublika Altaj
Respublika Ingushetia
Respublika Burjatia
Kurganskaja oblast
Respublika-Severnaja Osetia-Alania
Respublika Marij-El
Chitinskaja oblast
Kabardino-Balkarskaja Respublika
Penzenskaja oblast
Brjanskaja oblast
Respublika Kalmykia
Ivanovskaja oblast
Pskovskaja oblast
Amurskaja oblast
Tambovskaja oblast
Chuvashskaja Respublika
Respublika Adygea
Primorskij kraj
Korjakskij AO
respublika Mordovia
Kamchatskaja oblast
Chukotskij AO
Kaluzhskaja oblast
Kirovskaya oblast
Magadanskaja oblast
Kostromskaja oblast
Archangelskaja oblast
Rostovskaja oblast
Omskaja oblast
Stavroposkij kraj
Rjazanskaja oblast
Vladimirskaja oblast
Voronezhskaja oblast
Orlovskaja oblast
Tverskaja oblast
Smolenskaya oblast
Kurskaya oblast
Novosibirskaja oblast
Tajmyrskij AO
Respublika Saha (Jakutia)
Ul'janovskaja oblast
Sahalinskaja oblast
Habarovskij kray
Kaliningradskaya oblast
Saratovskaja oblast
Evenkijskij AO
Republika Hakassia
Tulskaja oblast
Respublika Karelia
Krasnodrskij kraj
Tomskaya oblast
Novgorodskaja oblast
Astrachanskaja oblast
Volgogradskaja oblast
Kemerovskaja oblast
Belgorodskaja oblast
Cheljabinskaja oblast
Murmanskaya oblast
Nizhegorodskaja oblast
Moskovskaja oblast
Udmurtskaja Republic
Irkutskaya oblast
Vologodskaja oblast
Krasnojarskij kraj
Leningradskaya oblast
Lipetskaya oblast
Moskva
Nenetskij AO
Orenburgskaja oblast
Permskaja oblast
Respublika Bashkortostan
Resbublika Komi
Respublika Tatarstan
Samarskaja oblast
Sankt-Peterburg
Sverdlovskaja oblast
Tjumenaskaja oblast
Hanty-Mansijskij AO
Chechenskaja Respublika
Jamalo-Nenetskij AO
Jaroslavskaja oblast